

Section 5-2: Angles and Perpendicular Lines

By the end of this lesson, you should be able to answer:

- How do you identify and use perpendicular lines?
- How do you identify and use angle relationships?

Where you might see this in the real world:

- Health, physics, paper folding, navigation

Define the following terms:

1. Ray
2. Opposite Rays
3. Angle
4. Vertex
5. Degrees
6. Complementary Angles
7. Supplementary Angles
8. Adjacent Angles
9. Congruent Angles
10. Perpendicular Lines
11. Vertical Angles
12. Bisector of an Angle

Once again, this lesson will deal a lot with the terminology we have seen above. Make sure you get comfortable working with these terms.

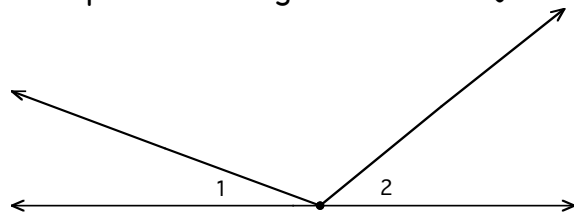
Example 1: The larger of two supplementary angles measures 40° more than the smaller. Find the measure of each angle.

Example 2: Draw the figure where \overline{AD} and \overline{CB} intersect at Q. \overline{EF} bisects $\angle AQC$. $m\angle AQE = 40^\circ$. Find $m\angle BQD$.

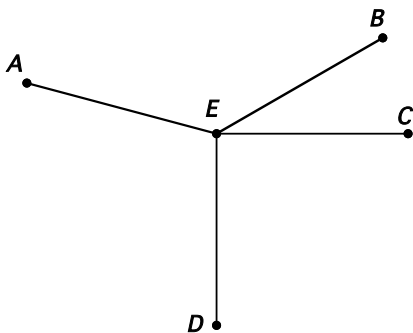
You will notice that we made some markings on this drawing to represent congruent angles. Making these markings will help us to remember what information we have.

Example 3: If $m\angle A = 20^\circ$, $m\angle B = 60^\circ$, and $m\angle C = 100^\circ$, are angles A, B, and C supplementary angles? Explain.

Example 4: Are angles 1 and 2 adjacent angles? Explain.



Example 5: Are $\angle AEB$ and $\angle CED$ vertical angles? Explain.



Problem Set:

"No problem is too small or too trivial if we can really do something about it."
- Richard Feynman